

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

Element Code: ABNGA01020

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Botaurus lentiginosus*
COMMON NAME: American Bittern, Freckled Heron
SYNONYMS: *Ardea lentiginosa*
FAMILY: *Ardeidae*

AUTHOR, PLACE OF PUBLICATION: Rackett, 1813. In Pultney, Catalogue of Birds, Shells and ... Plants Dorsetshire, ed. 2, p. 14. (Parish of Piddletown, Dorsetshire, England.)

TYPE LOCALITY: *Ardea lentiginosa*: Parish of Piddletown, Dorsetshire, England.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: There are four species of bitterns identified in the Genus *Botaurus*, with only one, *B. lentiginosus* occurring in the United States. Sibley and Monroe (1990), suggested that *B. lentiginosus* and *B. pinnatus*, (the South American Bittern) represent a superspecies, based in part on DNA-DNA hybridization studies (Gibbs et al 1992).

DESCRIPTION: A stocky wading bird with a straight pointed bill, relatively short neck and legs, and somewhat pointed wings; darker flight feathers; bill dull yellow with a dusky tip on the upper mandible; legs and feet are greenish yellow; breeding plumage includes generally inconspicuous white ruffs on the shoulders and two small patches on the back. Adult plumage is all brown above (finely flecked with black) and heavily streaked with brown and white below. The crown is rusty brown. An elongated black patch extends from below the eye down the side of the neck, a characteristic unique among herons. The throat is white. A brown medium sized heron, 60-85 cm (24-33.5 in) long; wing span 107 cm (42 in). Sexes are similar, except that the male is slightly larger. Juveniles differ only in lacking black neck patches, which are obtained in the first winter. Plumage does not change seasonally.

AIDS TO IDENTIFICATION: About twice the size of the least bittern (*Ixobrychus exilis*). In flight seems hurried, ungraceful and stiff. When disturbed, they often freeze in an upright, concealing posture, with head and bill upturned. Possibly confused with immature night herons (*Nyctanassa* sp.) which are darker brown, lack contrast between dark wingtips and pale body, and have no black neck patch. Green-backed Heron (*Butorides virescens*) much smaller; lacks black neck stripe; has dark green wings and tail. The best field mark for a sitting bird is the broad black whisker, which no other heron or bittern has. In flight the blackish flight feathers are diagnostic (Robbins et al).

ILLUSTRATIONS: Color drawing (Robbins et al 1983 p.99)
Color drawing (National Geographic 1999, Third Edition p.57)
Color drawing (Peterson 1990)
Color photo (Farrand, Jr. 1988 p. 129)

TOTAL RANGE: *Nearctic:* During the breeding season, the American Bittern ranges from the mid United States to northern Canada. Northern limit spans from about 55 degrees north in British Columbia, north to Great Slave Lake in the Northwest Territories, along the southern shores of Hudson Bay, and east to Newfoundland its wintering range stretches from the south Atlantic coast across the Gulf coast to southern California. Dependence on inland, freshwater marshlands suggests that this species may be relict over much of the US. Historically, range may have shifted northward, tracking distribution of palustrine wetlands created by retreating glaciers. Occasional stragglers to Great Britain, Channel Islands, Iceland, Faeroes, Norway, Spain, Azores, and Canary Islands (Cramp and Simmons 1977).

RANGE WITHIN ARIZONA: Historically known to have bred in marshes above Mogollon Rim before 1915. Recent (1970s and 1980s) mid-summer observations occurred in lower Colorado River marshes, but breeding not confirmed. Rare, local winter visitor in large marshes in southern and western Arizona. Statewide status is not well known. It is now chiefly known as a rare transient in Arizona principally from April to mid May and September to early October (Phillips et al 1964).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Call most often heard during the breeding season is low, resonant and composed of three syllables, rendered as *pump-er-lunk* and *dunk-a-doo*, preceded by a series of clicking and gulping sounds. American Bitterns rely on these resounding calls to communicate within the visually restricting emergent vegetation that dominates nesting habitats. Compared to high frequency sounds, low frequency sounds such as these calls attenuate less rapidly and are audible at a greater distance in dense marsh vegetation. National Geographic (1999) reports distinctive spring and early summer song as *oonk-a-lunk*; most often heard at dusk in dense marsh reeds. When flushed, may give a *kok-kok-kok*. Typically walks on ground in a slow, deliberate fashion. Feet lifted slowly, toes outspread. Head withdrawn when walking in open, outstretched when under cover. May run quickly with wings folded when in pursuit of prey or disturbed (Gibbs et al 1992). When alarmed, freezes with bill pointing up, or flushes with rapid wingbeats. In flight, outer wing blackish, bill held more horizontal.

REPRODUCTION: Courtship begins in spring. The male shows his plumage to good advantage, flaring his ruffs much like a grouse or pheasant. By April, the female has constructed a single platform nest, which may be 12 to 16 inches across. The nest is composed of dead reeds, rushes, etc. She usually places it in tall emergent vegetation, on

matted vegetation, a few inches above shallow water or mud, but sometimes directly on the ground (Johnson 1992). Separate paths for nest exit and entrance. Clutch size ranges from 2 - 7 brownish or olive eggs, usually 3 - 5. Incubation by the female only, begins with the first egg and typically lasts 24-28 days. Young leave nest after 1-2 weeks but linger near to nest until 2-4 weeks old.

FOOD HABITS: The basic diet of the American Bittern includes insects, amphibians, crayfish, small fish and mammals. When foraging, it relies mostly on stealth, waiting motionless for its prey to pass by. Its coloration adds to its ability to go undetected by prey. When its prey is in reach, the bird darts forward and seizes the prey in its bill. The prey is then killed by biting or shaking and is swallowed head first. Young fed regurgitant.

HABITAT: Marshlands and very wet meadows. Rarely seen away from dense reeds, rushes, cordgrass, cattails and other emergent vegetation. Occurs along rivers, lakes, and ponds where marshy habitat is well developed. Bitterns tend to prefer beaver created wetlands to those of glacial origin. Chiefly freshwater wetlands with tall emergent vegetation. Sparsely vegetated wetlands occasionally, tidal marshes rarely. Nest sometimes in upland cover surrounding a wetland basin, provided that cover not modified by agriculture (Duebbert & Lokemoen 1977).

ELEVATION: Breeding occurs in valley bottom marshes or on flat plateau regions, from near sea level on the coast to 7,000 ft (2135 m) in the interior.

PLANT COMMUNITY:

POPULATION TRENDS: The population is undergoing a substantial decline due to loss and degradation of habitat. Eutrophication, siltation, chemical contamination, and human disturbance seriously reduced habitat quality, primarily by damaging prey supplies even at large, protected wetlands (Gibbs et al 1992). Changes in wetland isolation and stabilized water regimes are also eroding habitat quality. Acid rain is another significant threat to the species due to its damaging effects on wetlands.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:

None

STATE STATUS:

WSC (WSCA, AGFD in prep)

[Candidate TNW, AGFD 1988]

OTHER STATUS:

MANAGEMENT FACTORS: Preservation of freshwater wetland habitats, particularly large (>10 ha), shallow wetlands with dense growth of robust emergents, is the most urgent management need. Wetlands used by American Bitterns also need to be protected from chemical contamination, siltation, eutrophication, and other forms of pollution that harm the birds or their food supplies (Gibbs et al 1992).

PROTECTIVE MEASURES TAKEN: Listed as a Nongame Species of Management Concern by USFWS (1987) in 1982 and 1987.

SUGGESTED PROJECTS: Conservation of this species would be facilitated by: (1) Development of standardized survey methodologies for monitoring populations and habitat availability. (2) A detailed study of the breeding biology, including diet, home range, habitat requirements, mating systems, ability to re-nest, sources and rates of mortality in adults, juveniles, nestlings, and eggs, and juvenile dispersal patterns and philopatry. (3) Examination of factors that regulate populations. (4) Identification of migration routes, major stopover sites, and major overwintering areas used. (5) Examination of habitat use during migration and wintering. (6) Development of wetland management strategies that benefit nesting, migrant, and wintering individuals. (7) Monitoring containment levels in birds and their eggs in industrialized, agricultural and undisturbed parts of range (Gibbs et al 1992).

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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